GAPAA
Infinity™ Air Purifier
Sizes 1625 and 2025

Carrier®
Turn to the Experts℠

Installation Instructions

NOTE: Read the entire instruction manual before starting the install.

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INTRODUCTION

Congratulations for selecting the Infinity™ Air Purifier for your home comfort system! The Infinity™ Air Purifier is proven to remove and kill airborne germs and allergens, including viruses, bacteria, and mold spores. The Infinity™ Air Purifier is a cornerstone of Carrier's Healthy Home Solutions for providing healthier, cleaner air in your home.

HOW IT WORKS

The Infinity™ Air Purifier provides extremely high filtration performance while killing captured contaminants, including viruses, bacteria, and mold spores. The Infinity™ Air Purifier treats the entire air-stream through a state of the art, three-stage process, exclusive to Carrier.

In stage one, the particles are electrically charged by a precision-point ionization array as they enter the Infinity™ Air Purifier.

In stage two, the charged particles are electrically attracted to the air purification cartridge, which is located within an electric field.

In stage three, captured particles are killed by electrical current flow and ion bombardment.

The Infinity™ Air Purifier is CSA certified for shock and electrical fire hazard only.

La Infinity™ Air Purifier certification CSA vise uniquement les risques de choc electrique et.

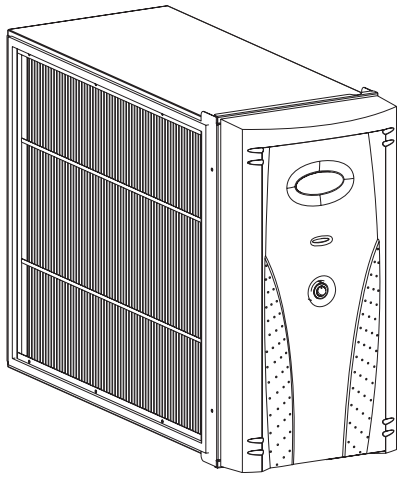

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Fig. 1 – GAPAA Unit

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Have fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

APPLICATION CONSIDERATIONS

The Infinity™ Air Purifier is designed for use in the return air duct of a forced air heating, cooling, and ventilation system. Models GAPAAXCC1625 and GAPAAXCC2025 are specifically designed for use in systems with a forced air gas furnace.

Air Conditioning

The Infinity™ Air Purifier should be installed in a system so that all the return air is circulated through the air purifier. It should be located upstream of both the furnace and the air conditioning evaporator coil. This will help keep the furnace and evaporator coil clean and prevent condensation from forming within the Infinity™ Air Purifier.

Humidifiers

An evaporative humidifier can be mounted upstream of the Infinity™ Air Purifier. It is best to install atomizing humidifiers downstream of the air purifier because hard water salt deposits and water droplets may damage air purifier. If an atomizing humidifier must be mounted upstream of the Infinity™ Air Purifier, it should be mounted as far upstream as possible (at least 6 ft. recommended), and a standard disposable furnace filter should be mounted between the humidifier and the air purifier to trap hard water salt deposits and water droplets.

Transitions

If the return air duct or furnace openings do not fit the Infinity™ Air Purifier cabinet openings, gradual transitions are recommended to reduce air turbulence and maximize efficiency. No more than 20 degrees (about 4 in. per running ft.) of expansion should be used on each side of the transition fitting.

Turning Vanes

If the Infinity™ Air Purifier is installed adjacent to a 90 degree duct elbow, turning vanes should be added inside duct to improve air distribution across the face of the air purifier.

Electrical Power

The Infinity™ Air Purifier should only be powered when airflow is present. The furnace control EAC terminals provide power only when the furnace blower is operating. Infinity™ Air Purifier models GAPAAXCC1625 and GAPAAXCC2025 are designed to be powered from the electronic air cleaner (EAC) terminals on a furnace electronic control. If EAC terminals are not available, an alternative airflow sensing mechanism must be used to ensure the Infinity™ Air Purifier is only powered when airflow is present. Contact local Carrier distributor for information on approved alternatives.

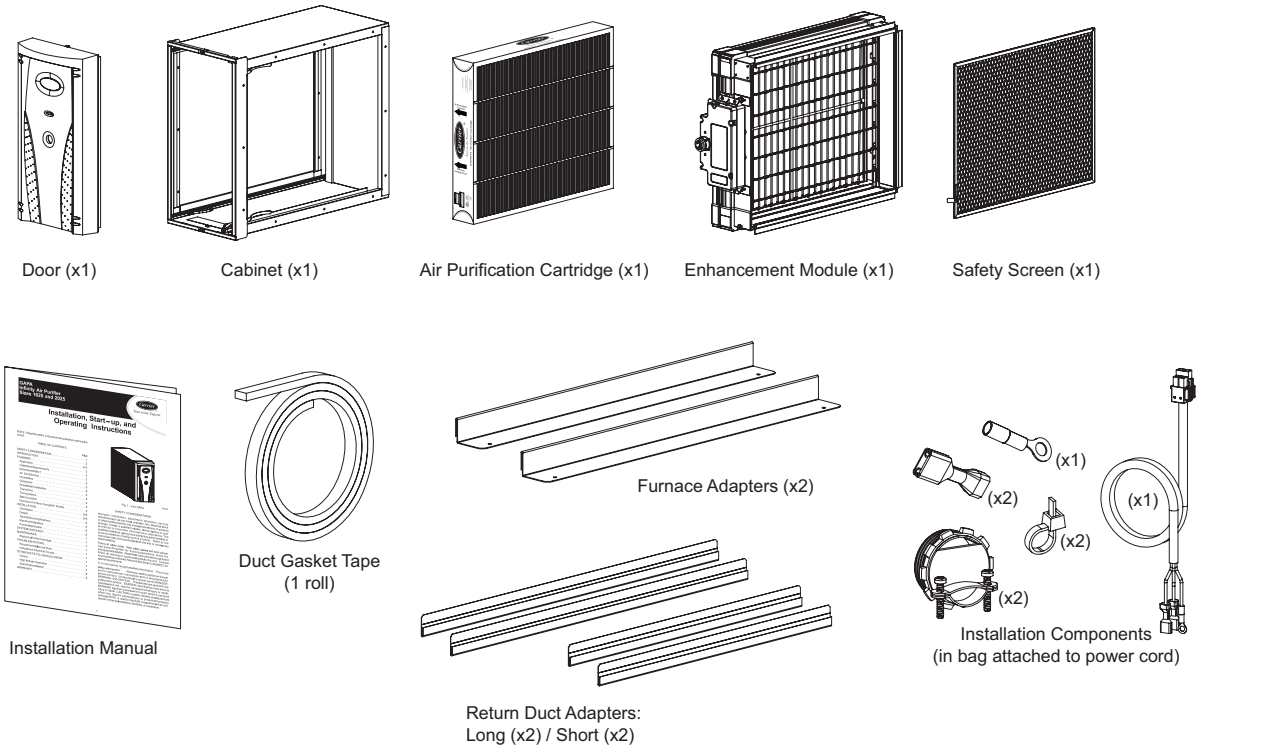

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Fig. 2 – Infinity™ Air Purifier Components

INSTALLATION

Step 1 —Check Infinity™ Air Purifier Components

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

a. Carefully remove all items from the box.

Step 2 —Identify Mounting Location

a. Identify a mounting orientation for the Infinity™ Air Purifier in the return air duct (see Fig. 3).

b. Ensure airflow direction through the Infinity™ Air Purifier matches the arrows on the face of the air purifier cartridge. The Infinity™ Air Purifier can be rotated 180 degrees to accommodate the cabinet orientation.

c. The location of the Infinity™ Air Purifier should be readily accessible. Enough room should be provided for periodic replacement of the air purifier cartridges.

⚠ WARNING

ELECTRICAL SHOCK AND UNIT DAMAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Only a trained, experienced service person should install the Infinity™ Air Purifier. A thorough check of the unit installation should be completed before unit operation. Before performing installation, service or maintenance operations on unit, turn off all power to unit. Tag disconnect switch with lockout tag.

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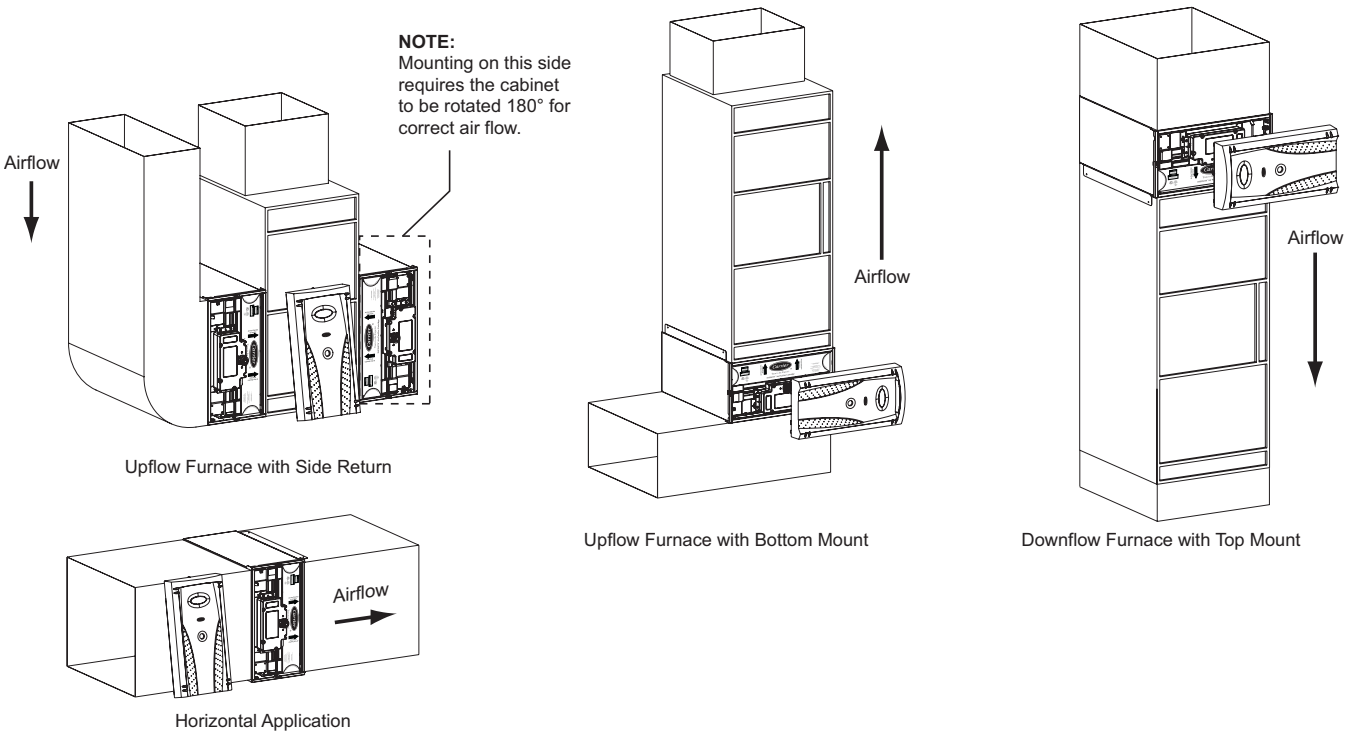

Fig. 3 – Infinity™ Air Purifier Cabinet Orientation

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than 1 disconnect switch.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Cabinets will support a maximum weight of 400 lbs when installed beneath a vertical furnace or air-handling unit. When setting furnace on cabinet, do not drop it into place. Position the furnace correctly on the cabinet to prevent a corner from slipping down and damaging the cabinet or its components.

a. Turn off power to the heating and cooling system.

b. Remove the existing furnace filter and discard. Excessive system static may result if the Infinity™ Air Purifier is used with other filtration devices.

c. Remove the air purifier cartridge and enhancement module from the Infinity™ Air Purifier cabinet.

d. Position the cabinet between the furnace and return air duct (see Fig. 3 and 4). A transition duct may be required.

e. Furnace adapters have been included for installer convenience. They are designed for top or bottom mount installations (see Fig. 5).

f. Return air duct adapters have been included for installer convenience. They should be used to connect the upstream side of the air purifier cabinet to the return air duct (see Fig. 6).

g. Install foam tape between the furnace and the air purifier cabinet.

h. Mounting holes are provided for ductwork and furnace attachment.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in unit damage.

Mounting holes are provided for duct work and furnace attachment. The screws on the down-stream side of the cabinet should be installed so that the screw heads are inside air purifier cabinet to prevent damage to the air purifier cartridge.

i. Seal seams with tape or caulking after the Infinity™ Air Purifier cabinet has been secured.

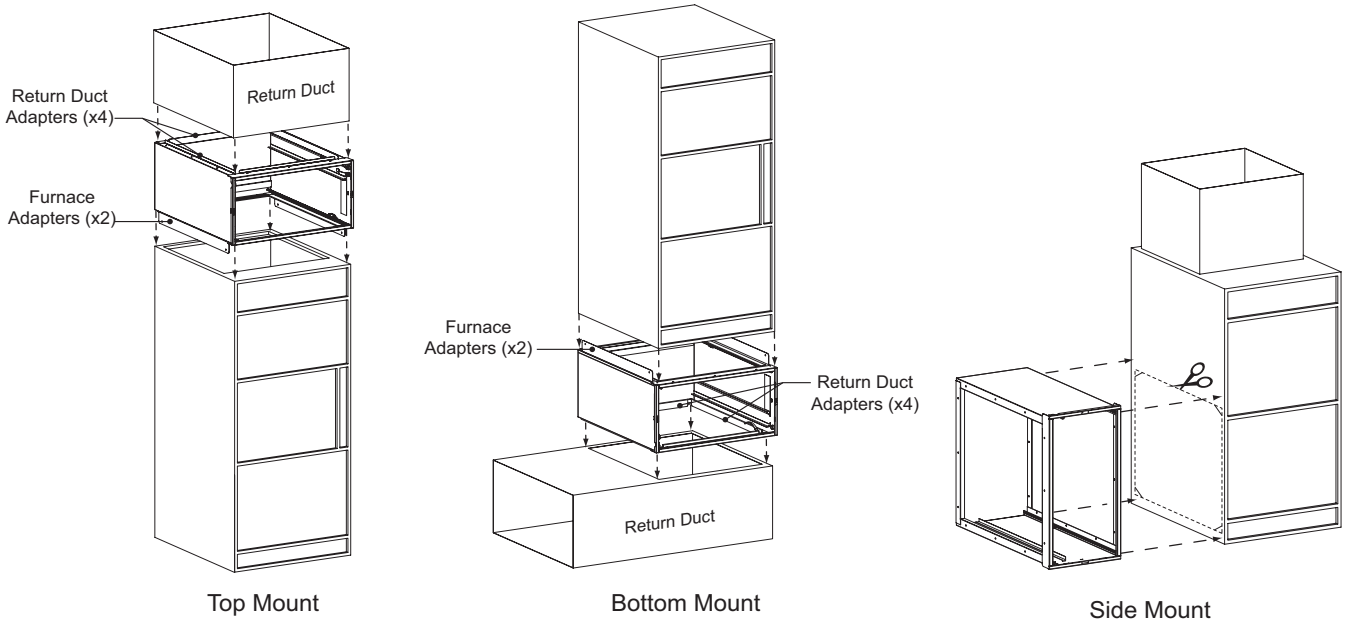

Fig. 4 – Mounting Infinity™ Air Purifier Cabinet

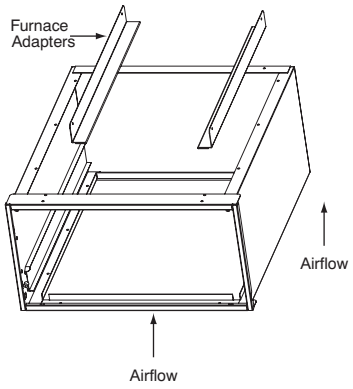

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Fig. 5 – Use of Furnace Adapters

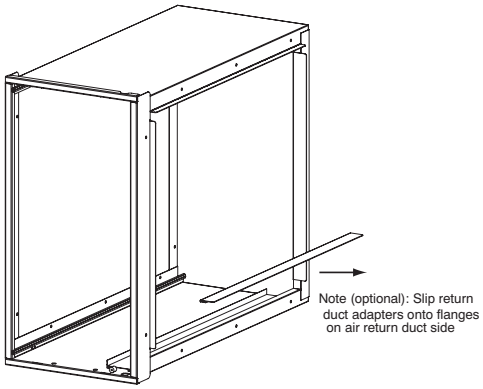

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Fig. 6 – Use of Return Duct Adapters

Step 4 —Wiring

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than 1 disconnect switch.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

This unit cannot be powered directly from blower motor leads. Voltages can exceed 190 VAC (120v motors). Do not wire directly to blower motor. Wiring to blower motor will damage power supply and void warranty.

a. Ensure power has been removed from the heating and cooling system.

b. Turn the Infinity™ Air Purifier power switch off.

c. Connect the power cord to the power supply connector (see Fig. 7).

d. Route the power cord through nearest cabinet hole and protect with enclosed cable connector. Zip ties have been enclosed to secure the power cord to the side of the power supply.

e. Attach the quick connect terminals to the furnace EAC-1 and EAC-2 spade connections. Attach the ground ring to furnace chassis ground.

NOTE: The Infinity™ Air Purifier is to be powered by 115v/60 Hz.

NOTE: The Infinity™ Air Purifier should only be powered when airflow is present. The furnace control EAC spade connections provide power only when the furnace blower is operating. If EAC connections are not available, an alternative airflow sensing mechanism must be used to ensure the Infinity™ Air Purifier is only powered when airflow is present. Contact a local Carrier distributor for information on approved alternatives.

⚠ CAUTION

UNIT COMPONENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Black Lead - Connect to HOT (L1) or EAC-1 when provided.
White Lead - Connect to Neutral (L2) or EAC-2 when provided.
Green/Ground Lead - Connect to Appliance Ground (Chassis)

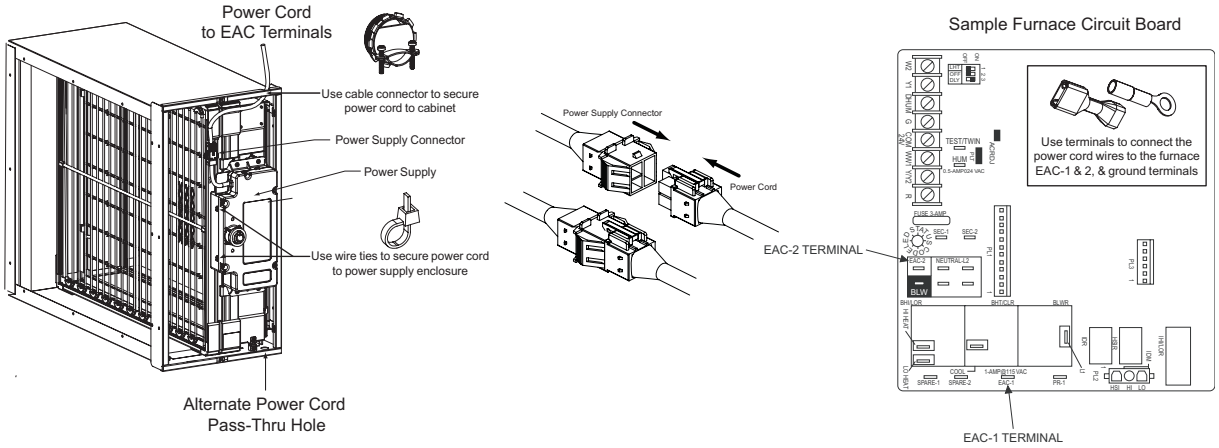

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Fig. 7 – Infinity™ Air Purifier Electrical Connections

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START-UP AND OPERATION

Step 1 —Checking Air Purifier Operation

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than one (1) disconnect switch.

a. Attach the Infinity™ Air Purifier door to the cabinet. A magnet in the door (see Fig. 9) is used to activate a safety switch in the power supply when the door is installed. The power supply will not energize the air purifier unless the safety switch is activated.

b. Turn the HVAC system power on and adjust the thermostat or Infinity™ System Control to activate the system fan.

c. Turn the Infinity™ Air Purifier power switch to on position.

d. The power indicator light above the Air Purifier power switch should illuminate (see Fig. 8).

e. Check to ensure the light goes off when the Infinity™ Air Purifier power switch is set to off, when the blower goes off, or when the HVAC system power is turned off.

Step 2 —Infinity Control

a. When the Infinity™ Air Purifier is used with an Infinity Control, the Infinity Control can be configured to remind the homeowner when it is time to change the Infinity™ Air Purifier cartridge. This maintenance reminder can be based on either the TrueSense™ dirty filter algorithm or time. The installer should use their discretion to select the most appropriate option based on the initial system static pressure.

Step 3 —Maximizing Performance

a. Maximum air purification performance is obtained when the furnace blower is set for continuous operation on the thermostat or Infinity Control.

MAINTENANCE

The Infinity ™ Air Purifier is designed to require minimal maintenance. Maintenance is limited to the replacement of the air purification cartridge and inspection/brush cleaning of the ionization array. Frequency of air purifier cartridge replacement and cleaning of the ionization array may vary depending on ductwork design and local environmental conditions.

To replace the air purifier cartridge, complete the following steps:

Step 1 —Turn the heating and cooling system power off.

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than one (1) disconnect switch.

Step 2 —Turn the Infinity™ Air Purifier switch to the off position.

Step 3 —Remove the Infinity™ Air Purifier door.

Step 4 —Slide out the old air purifier cartridge and discard.

Step 5 —Install the new air purifier cartridge.

NOTE: Make sure that the arrows on the air purifier cartridge point toward the fan coil. This should be in the same direction as airflow.

Step 6 —Replace the Infinity™ Air Purifier door.

Step 7 —Turn the Infinity™ Air Purifier switch to the on position.

Step 8 —Turn heating and cooling system power on.

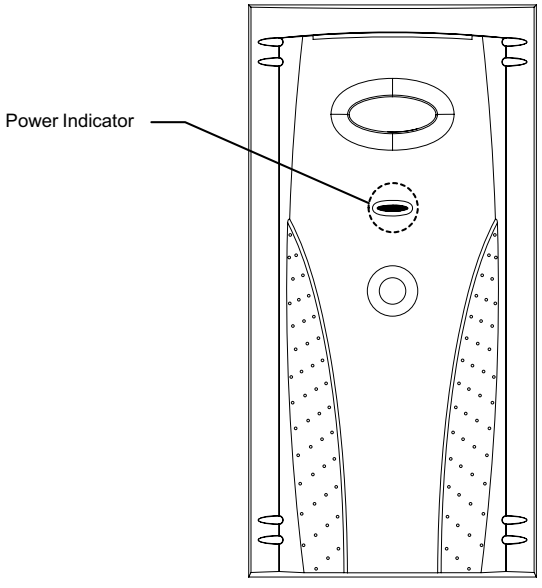

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Fig. 8 – Power Indicator

At the time of air purifier cartridge replacement, if a powdery residue is noticed on the tips of the points in the ionization array, proceed to clean them by completing the following steps:

Step 1 —Turn heating and cooling system power off.

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than one (1) disconnect switch.

Step 2 —Turn the Infinity™ Air Purifier switch to the off position.

Step 3 —Remove the Infinity™ Air Purifier door.

Step 4 —Unplug the power cord from the enhancement module.

Step 5 —Slide out the enhancement module assembly and safety screen.

⚠ WARNING

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

Step 6 —Slide out the Safety Screen and set aside.

NOTE: Best cleaning tools: 5 inch handle paint brush with 2 inch width (or greater) brush point (synthetic or natural bristle) (See Fig. 14) or vacuum cleaner with brush attachment.

Step 7 —Gently stroke the ionization pins on the top plane of each bar with enough brush depth to hit front and back tips of the points in the ionization array. Use a gentle back and forth brushing motion to clean any small accumulations from the tips of the points. If desired, use vacuum cleaner with brush attachment to gently vacuum the frame and components of enhancement module.

Step 8 —Reinstall the Safety Screen.

Step 9 —Slide in enhancement module.

Step 10 —Reconnect power cord.

Step 11 —Replace the Infinity™ Air Purifier Door

Step 12 —Turn the Infinity™ Air Purifier switch to the on position.

Step 13 —Turn heating and cooling system power on .

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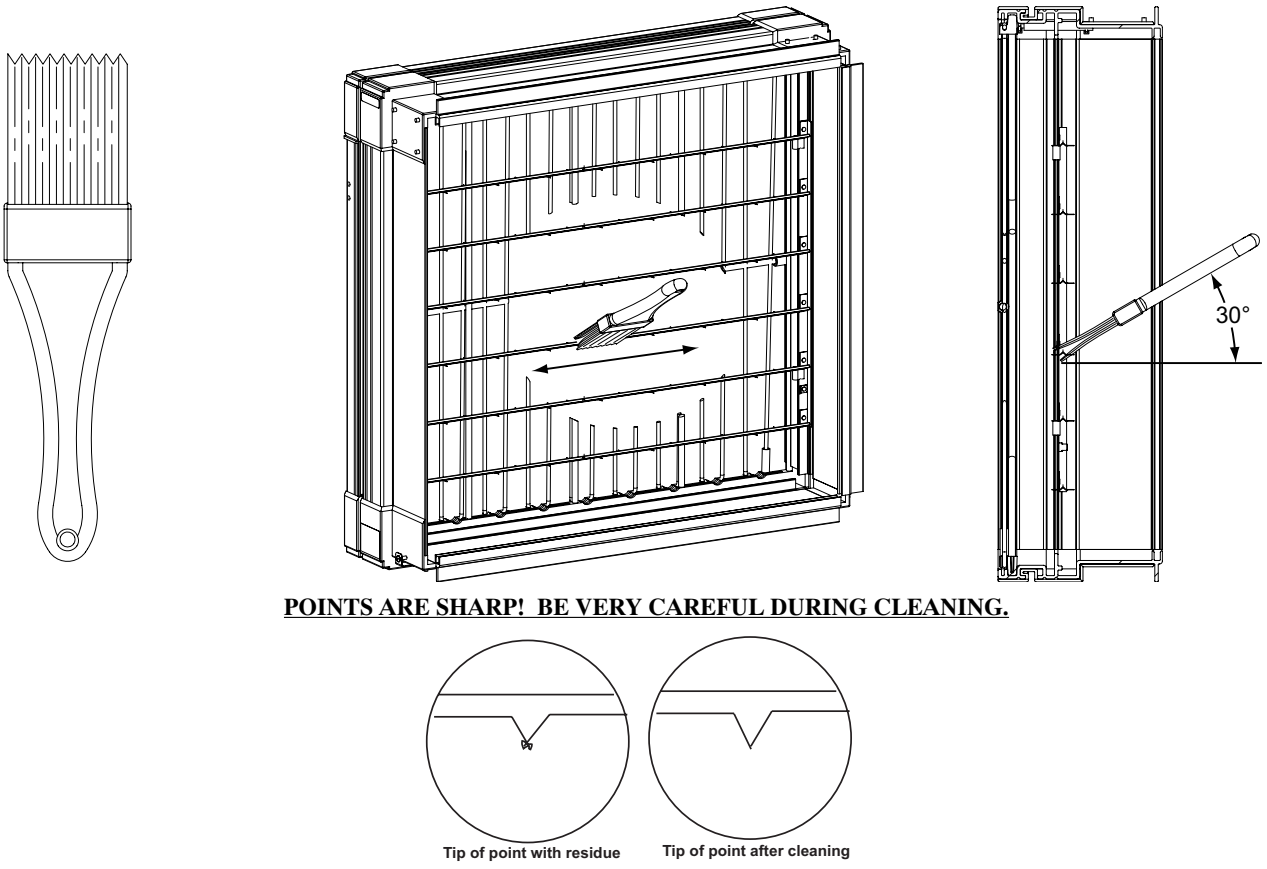

Fig. 9 – Removal of Deposits from Ionization Pins

TROUBLESHOOTING

⚠ CAUTION

SAFETY HAZARD

Failure to follow this caution may result in personal injury or equipment damage.

The following instructions are for use by qualified personnel only.

⚠ WARNING

ELECTRICAL SHOCK AND HIGH VOLTAGE HAZARD

Failure to follow this warning could result in personal injury or death.

The following procedures will expose electrical components. Disconnect power between checks and proceed carefully.

The Infinity™ Air Purifier is equipped with a power indicator light located on the door (see Fig. 8). This power indicator light will illuminate when the Infinity™ Air Purifier door is installed, the power switch is in the on position, AND the furnace blower is running. If the power indicator light is not illuminated, follow the troubleshooting steps below.

Step 1 —Check that the Infinity™ Air Purifier door is installed.

NOTE: A magnet in the door (see Fig. 9) is used to activate a safety switch in the power supply when the door is installed. The power supply will not energize the air purifier unless the safety switch is activated.

Step 2 —Check that the Infinity™ Air Purifier power switch is in the on (closed) position.

Step 3 —Confirm that the furnace blower is operating.

NOTE: Power will not be supplied to the Infinity™ Air Purifier from the furnace controls EAC terminals unless the blower is running.

Step 4 —Confirm that power provided from the furnace control EAC terminals is being conducted through the wiring to the Infinity™ Air Purifier power supply.

Step 5 —If all of the above steps are completed and the power indicator light is still not illuminating, replace the power supply on the enhancement module. Note that there are no serviceable parts within the power supply.

SPECIFICATIONS AND DIMENSIONS

Table 1—Specifications and Dimensions

Specifications	GAPAAXCC1625	GAPAAXCC2025
Color	Taupe Metallic	Taupe Metallic
Cabinet Material	20 Ga. Powder Coated Steel	20 Ga. Powder Coated Steel
Electrical	115v/60 Hz (from furnace EAC terminals)	115v/60 Hz (from furnace EAC terminals)
Maximum Airflow (CFM)	1600	2000
Efficiency	Equivalent to MERV 15	Equivalent to MERV 15
Replacement Cartridge	GAPCCCAR1625	GAPCCCAR2025
Pressure Drop @ Maximum Airflow	.25 InH20	.25 InH20
Dimensions	**GAPAAXCC1625**	**GAPAAXCC2025**
A	18–3/8	21–7/8
B	15–1/8	18–5/8
C	11–1/8	11–1/8
D	17–1/2	21
E	22-1/8	22-1/8
F	25–1/4	25–1/4

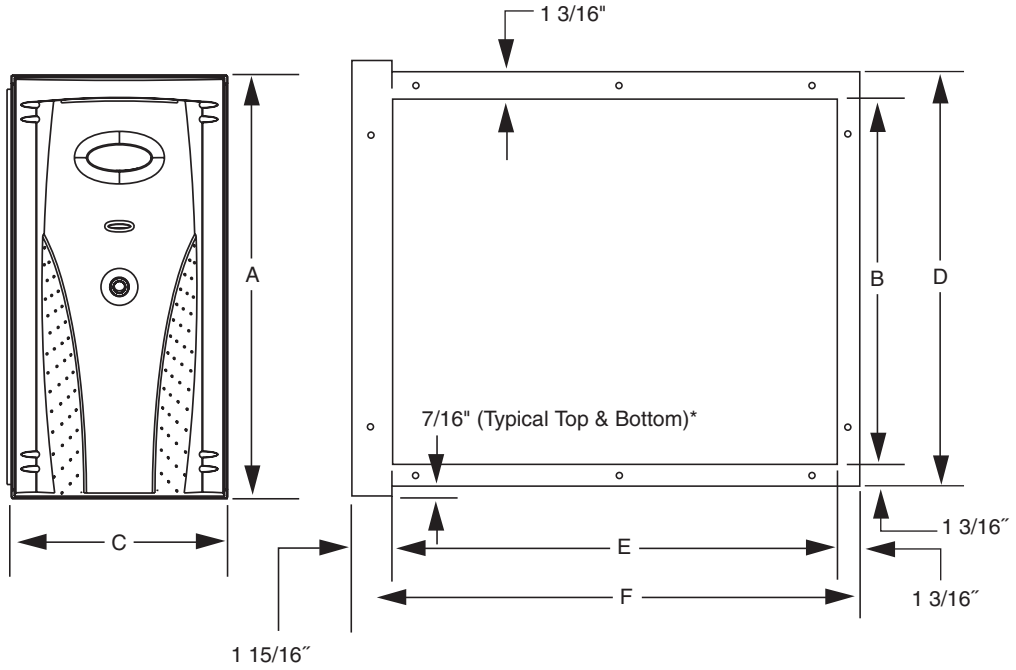

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Fig. 10 – Dimensions

WARRANTY

FOR SERVICE OR REPAIR, FOLLOW THESE STEPS IN ORDER:

FIRST: Contact the installer. You may find their name on the product or in your Homeowner's Packet. If the installer's name is not known, call your builder or home retailer if yours is a new residence.
SECOND: Contact the nearest distributor. (See telephone yellow pages.)
THIRD: **Contact:**
CARRIER CORPORATION
Consumer Relations
P.O. Box 4808
Syracuse, New York 13221
Telephone: 1-800-CARRIER (227-7437)
1-315-432-7885 (Canada)

Model No. _____ Unit Serial No. _____

Date of Installation _____ Installed by _____

Name of Owner _____ Address of Installation _____

_____

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INFINITY™ AIR PURIFIERS

FIVE-YEAR LIMITED WARRANTY--- Carrier (herein after referred to as 'Company') warrants this product to be free from defects in material and workmanship. If a defect is found within five years from the date of original installation of the product (whether or not actual use begins on that date) Company will provide a new or remanufactured part, at Company's sole option, to replace any defective part, without charge for the part itself.

This warranty does not include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.

WARRANTY CONDITIONS:
1. Warranties apply only to products in their original installation location.
2. Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the Owner's Manual and Company's service information.
3. Defective parts must be returned to the distributor through a registered servicing dealer for credit.
4. All work shall be performed during normal working hours.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY OR CONDITION IS GIVEN AND APPLIES. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

CARRIER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual including coil cleaning, filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration, or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments, or other conditions beyond the control of Company.
5. Parts not supplied or designated by CARRIER, or damages resulting from their use.
6. Company products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
8. **ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Catalog No. 49004DP52
07/06

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